41. A method for increasing light olefin yield during conversion of oxygenates to olefins comprising:

    (a)   contacting a feed including an oxygenate in a primary reactor with a non-zeolitic molecular sieve catalyst under first conditions effective to produce a first product including light olefins and a heavy hydrocarbon fraction including heavy hydrocarbons;

    (b)   separating said light olefins from said heavy hydrocarbon fraction;

    (c)   feeding at least a portion of said heavy hydrocarbon fraction to a second reactor selected from the group consisting of said primary reactor and a separate reactor; and

    (d)   ~~subjecting~~ *Contacting* said at least a portion of said heavy hydrocarbon fraction in said second reactor to second conditions effective to convert at least a portion of said heavy hydrocarbons to light olefins.

42. A method for increasing light olefin yield during conversion of oxygenates to olefins comprising:

    (a)   contacting a feed in a primary reactor with a non-zeolitic molecular sieve catalyst under first conditions effective to produce a first product including light olefins and a heavy hydrocarbon fraction including heavy hydrocarbons;

    (b)   separating said light olefins from said heavy hydrocarbon fraction;

    (c)   feeding at least a portion of said heavy hydrocarbon fraction to a separate reactor; and

    (d)   contacting said at least a portion of said heavy hydrocarbon fraction with a second molecular sieve catalyst in said separate reactor under conditions effective to promote conversion of said heavy hydrocarbons to light olefins.

43. The method of claim 41 wherein said second molecular sieve catalyst

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comprises a zeolite.

44. The method of claim 42 wherein said second molecular sieve catalyst comprises a zeolite.

45. The method of claim 41 wherein said non-zeolitic molecular sieve catalyst is a silicoaluminophosphate selected from the group consisting of SAPO-44, SAPO-34, SAPO-18, and SAPO-17.

46. The method of claim 42 wherein said non-zeolitic molecular sieve catalyst is a silicoaluminophosphate selected from the group consisting of SAPO-44, SAPO-34, SAPO-18, and SAPO-17.

47. The method of claim 43 wherein said zeolite is ZSM-5.

48. The method of claim 44 wherein said zeolite is ZSM-5.

49. The method of claim 44 wherein said non-zeolitic molecular sieve catalyst comprises a microporous framework including pores having a diameter in the range of from about 5 to about 10 Angstroms.

50. The method of claim 42 wherein said non-zeolitic molecular sieve catalyst and said second molecular sieve catalyst comprise a microporous framework including pores having a diameter in the range of from about 5 to about 10 Angstroms.

51. The method of claim 41 wherein said non-zeolitic molecular sieve catalyst comprises a microporous framework including pores having a diameter less than about 5 Angstroms.

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52. The method of claim 42 wherein said non-zeolitic molecular sieve catalyst comprises a microporous framework including pores having a diameter less than about 5 Angstroms.

53. The method of claim 41 wherein said heavy hydrocarbon fraction consists essentially of said heavy hydrocarbons.

54. The method of claim 42 wherein said heavy hydrocarbon fraction consists essentially of said heavy hydrocarbons.

55. A method for increasing light olefin yield during conversion of oxygenates to olefins comprising:

   (a) contacting a feed including an oxygenate in a primary reactor with a non-zeolitic molecular sieve catalyst under conditions effective to produce a product including light olefins;

   (b) separating said product into said light olefins and a heavy hydrocarbon fraction including heavy hydrocarbons; and

   (c) recycling at least a portion of said heavy hydrocarbon fraction to said primary reactor.

56. The method of claim 55 wherein said ~~second~~ non- zeolitic molecular sieve catalyst is SAPO-34.

57. The method of claim 55 wherein said second molecular sieve catalyst is SAPO-34.

REMARKS

The applicant respectfully requests that the above amendments be entered. Claims 41-57 correspond to claims 1-6 and 23-40 of the parent application. These claims were indicated as being allowable by Examiner

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